

Mobile Platform Augmented Reality for Enhanced Operations on the International Space Station, Phase I

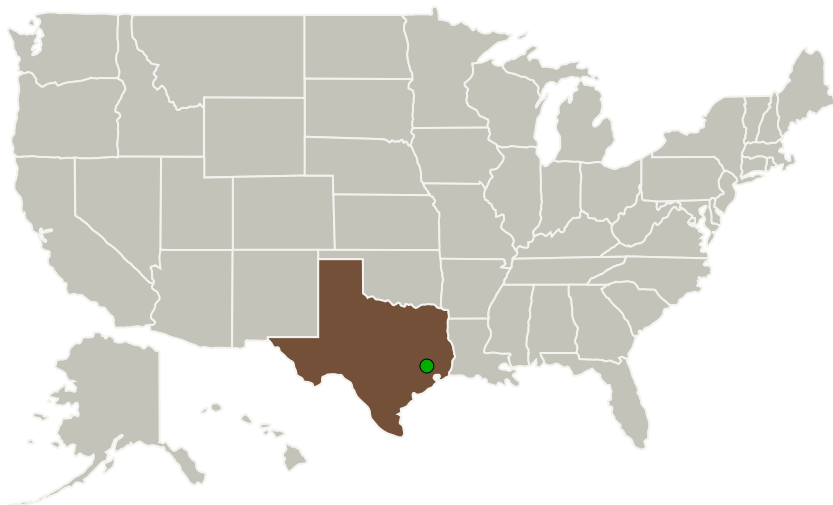
Completed Technology Project (2011 - 2011)



Project Introduction

To develop an Augmented Reality system that runs on a small portable device to aid crew in routine maintenance activities by providing enhanced information and situational awareness of their immediate environment. This system would improve the speed and quality of maintenance procedures, and reduce error and risk. The specific enhancements we will investigate include: - Overlaying devices with relevant telemetry. - Highlighting of items that require action, e.g., a switch that needs to be flipped, a hose that needs to be removed, or a bolt that needs to be tightened. - Information about consequences of actions, e.g., if the bolt is removed, this assembly will be detached or if the switch is flipped then this panel will be powered on. - Guidance aids through planned procedures or activities. - Navigation aids, e.g., where is the next device to be adjusted.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
● Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

Primary U.S. Work Locations

Texas



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Transitions

 **February 2011:** Project Start

 **September 2011:** Closed out

Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/138316>)

Project Management

Program Director:

Jason L Kessler

Program Manager:

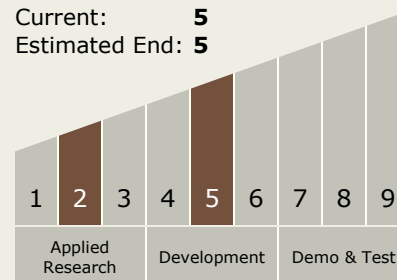
Carlos Torrez

Principal Investigator:

Robert J Phillips

Technology Maturity (TRL)

Start: 2
Current: 5
Estimated End: 5



Technology Areas

Primary:

- TX04 Robotic Systems
 - TX04.4 Human-Robot Interaction
 - TX04.4.3 Remote Interaction

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System